

Amendments to the Claims

The following listing of claims submitted as a courtesy.

Claim 1 (original): An infeed apparatus for a sheet material article trimmer, the infeed apparatus comprising:

a pusher element movable relative to a front table of the sheet material article trimmer and configured to move a sheet material article to be trimmed on the front table and into engagement with a backstop of the front table; and

a driver configured to move the pusher element at a same speed as the front table for a period of time with the pusher element in engagement with a first edge portion of the sheet material article and the backstop in engagement with a second edge portion of the sheet material article, the period of time being at least as long as a time required for a front clamp of the sheet material article trimmer to move through a distance corresponding to a difference in thickness between a thinnest sheet material article in a range of thicknesses and a thickest sheet material article in the range of thicknesses so as to grip the sheet material article against the front table.

Claim 2 (original): The infeed apparatus as recited in claim 1 wherein the pusher element is further configured to retract from the sheet material article and engage a next succeeding sheet material article to be trimmed.

Claim 3 (original): The infeed apparatus as recited in claim 1 wherein the driver includes:

a main cam rotated by a main trimmer drive of the sheet material article trimmer; and
at least one cam follower operatively connected to the pusher element and configured to follow the main cam so as to move the pusher element at the same speed as the front table when the cam follower is in a first arc of the main cam, the cam follower being on the first arc of the main cam for the period of time.

Claim 4 (previously presented): The infeed apparatus as recited in claim 3 wherein the main cam includes a second arc, the at least one cam follower being configured to follow the main cam

so as to move the pusher element through a return stroke when the cam follower is in the second arc of the main cam.

Claim 5 (original): The infeed apparatus as recited in claim 4 wherein the main cam includes a third arc, the at least one cam follower being configured to follow the main cam so as to move the pusher element through a forward stroke when the cam follower is in the third arc of the main cam.

Claim 6 (canceled).

Claim 7 (original): The infeed apparatus as recited in claim 4 wherein the at least one cam follower includes a first and a second cam follower disposed at opposite sides of the main cam and urged into engagement with the main cam.

Claim 8 (original): The infeed apparatus as recited in claim 1 wherein the driver includes a servo motor configured to vary a speed of the pusher element.

Claim 9 (original): The infeed apparatus as recited in claim 1 wherein the clamp is configured to grip the sheet material article against the front table for a trimming operation of the sheet material article trimmer.

Claim 10 (original): The infeed apparatus as recited in claim 9 wherein the trimming operation is performed using a front knife of the sheet material article trimmer disposed so as to reciprocate with the front table.

Claim 11 (original): The infeed apparatus as recited in claim 1 wherein the front table is included in a front trimmer assembly of the sheet material article trimmer.

Claims 12 to 20 (canceled).

Claim 21 (previously presented): An infeed apparatus for a sheet material article trimmer, the infeed apparatus comprising:

a pusher element movable relative to a front table of the sheet material article trimmer and configured to move a sheet material article to be trimmed on the front table and into engagement with a backstop of the front table; and

a driver configured to move the pusher element at a different speed than the front table to move the sheet material article to be trimmed on the front table and into engagement with the backstop and to move at a same speed as the front table for a period of time with the pusher element in engagement with a first edge portion of the sheet material article and the backstop in engagement with a second edge portion of the sheet material article, the period of time being at least as long as a time required for a front clamp of the sheet material article trimmer to move through a distance corresponding to a difference in thickness between a thinnest sheet material article in a range of thicknesses and a thickest sheet material article in the range of thicknesses so as to grip the sheet material article against the front table.